

Remarks

Summary

By this amendment, the specification was amended to correct a typographical error, claims 1-8 were cancelled, and claims 26-41 were added. Accordingly, claims 26-41 are now pending in this application.

Specification

The specification was amended to correct a minor typographical error.

Claims

In the Office Action dated December 9, 2006, claims 1-2 and 6-8 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,500,724 to Zurcher et al. (Zurcher); Claim 5 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,534,374 to Johnson et al. (Johnson), and under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,359,328 to Dubin et al. (Dubin); and, Claims 3-4 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Zurcher in view of Johnson. Without acquiescing to the examiner's reasoning, claims 1-8 have been cancelled, and new claims 26-41 have been added to more clearly define over the art of record.

For example, new independent claim 26 defines a metal resistor extending along a capping layer and contacting respective first and second lower interconnections formed in a first insulating layer through corresponding first and second windows formed in the capping layer. This is different from Zurcher, which merely discloses a resistor 28 connected between a lower metal layer 16 and an upper metal layer 44 through a via 40 but does not disclose that the resistor contacts first and second lower interconnections formed in an insulating layer. Accordingly, Zurcher does not support a rejection of new independent claim 26, or its associated dependent claims 27-36.

Similarly, resistor 32 in Johnson does not contact elements 24 and therefore Johnson does not support a rejection of independent claim 26 or its associated dependent claims. Likewise, Dubin also fails to disclose a metal resistor extending along a capping layer and contacting respective first and second interconnections through

corresponding windows in the capping layer, and therefore Dubin also fails to support a rejection of claims 26-36.

Independent claim 37 defines second and third windows penetrating a dielectric layer and a capping layer to expose corresponding second and third lower interconnections, and a metal resistor extending along the dielectric layer and contacting the second and third lower interconnections through the second and third windows. However, Zurcher, Johnson, and Dubin each fail to disclose a dielectric layer formed over a capping layer, and a metal resistor formed on the dielectric layer and contacting lower interconnections through windows penetrating the dielectric layer and the capping layer. Accordingly, Zurcher, Johnson, and Dubin each fail to support a rejection of claim 37 or its associated dependent claims 38-39.

Finally, independent claim 40 defines a device including first and second insulating layers and first and second etch stop layers formed on the respective first and second insulating layers. Claim 40 further defines a metal resistor extending along the second insulating layer and contacting respective first and second contacts, which penetrate the second insulating layer and contact respective first and second lower interconnections through corresponding windows in the first etch stop layer. Zurcher and Johnson both fail to disclose a resistor formed on a second insulating layer, and Dubin fails to disclose a second etch stop layer formed on the second insulating layer. Accordingly, Zurcher, Johnson, and Dubin each fail to support a rejection of independent claim 40 and its associated dependent claim 41.

Conclusion

Since none of the references relied upon in the Office Action will support rejections of now pending claims 26-41, Applicants respectfully request allowance of now pending claims 26-41.

Respectfully submitted,

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